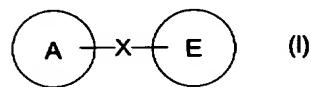


## CLAIMS

We claim:

1. An antifungal agent comprising a compound represented by the formula (I), or a salt or a hydrate thereof:



[wherein A represents a 5- to 10-membered heterocyclic group containing at least one nitrogen atom;

X represents a group represented by the formula  $-\text{NH}-\text{C}(=\text{Y})-(\text{CH}_2)_n-$ , a group represented by the formula  $-\text{C}(=\text{Y})-\text{NH}-(\text{CH}_2)_n-$ , a group represented by the formula  $-\text{C}(=\text{Z})-(\text{CH}_2)_n-$ , a group represented by the formula  $-\text{CH}_2-\text{NH}-(\text{CH}_2)_n-$ , a group represented by the formula  $-\text{NH}-\text{CH}_2-(\text{CH}_2)_n-$  or a group represented by the formula  $-\text{Z}-\text{CH}_2-(\text{CH}_2)_n-$ ;

10 Y represents an oxygen atom, a sulfur atom or  $\text{NR}^Y$  (wherein  $\text{R}^Y$  represents a  $\text{C}_{1-6}$  alkoxy group or a cyano group);

15 Z represents an oxygen atom or a sulfur atom;

n represents an integer from 0 to 3;

E represents a furyl group, a thienyl group, a pyrrolyl group, a pyridyl group, a tetrazolyl group, a thiazolyl group, a pyrazolyl group or a phenyl group;

20 with the proviso that A may contain 1 to 3 substituents selected from the following substituent groups a-1 and a-2, and that E has one or two substituents selected from the following substituent groups a-1 and a-2;

<Substituent group a-1>

Substituent group a-1 represents the group consisting of: a halogen atom, a hydroxyl group, a mercapto group, a cyano group, a carboxyl group, an amino group, a

carbamoyl group, a C<sub>1-6</sub> alkyl group, a C<sub>2-6</sub> alkenyl group, a C<sub>2-6</sub> alkynyl group, a C<sub>3-8</sub> cycloalkyl group, a C<sub>6-10</sub> aryl group, a 5- to 10-membered heterocyclic group, a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkyl group, a C<sub>3-8</sub> cycloalkylidene C<sub>1-6</sub> alkyl group, a C<sub>6-10</sub> aryl C<sub>1-6</sub> alkyl group, a 5- to 10-membered heterocyclic C<sub>1-6</sub> alkyl group, a C<sub>1-6</sub> alkoxy group, a C<sub>2-6</sub> alkenyloxy group, a C<sub>2-6</sub> alkynyloxy group, a C<sub>3-8</sub> cycloalkoxy group, a C<sub>6-10</sub> aryloxy group, a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkoxy group, a C<sub>6-10</sub> aryl C<sub>1-6</sub> alkoxy group, a 5- to 10-membered heterocyclic C<sub>1-6</sub> alkoxy group, a C<sub>1-6</sub> alkylthio group, a C<sub>2-6</sub> alkenylthio group, a C<sub>2-6</sub> alkynylthio group, a C<sub>3-8</sub> cycloalkylthio group, a C<sub>6-10</sub> arylthio group, a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkylthio group, a C<sub>6-10</sub> aryl C<sub>1-6</sub> alkylthio group, a 5- to 10-membered heterocyclic C<sub>1-6</sub> alkylthio group, a mono-C<sub>1-6</sub> alkylamino group, a mono-C<sub>2-6</sub> alkenylamino group, a mono-C<sub>2-6</sub> alkynylamino group, a mono-C<sub>3-8</sub> cycloalkylamino group, a mono-C<sub>6-10</sub> arylamino group, a mono-C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkylamino group, a mono-C<sub>6-10</sub> aryl C<sub>1-6</sub> alkylamino group, a mono-5- to 10-membered heterocyclic C<sub>1-6</sub> alkylamino group, a di-C<sub>1-6</sub> alkylamino group, a N-C<sub>2-6</sub> alkenyl-N-C<sub>1-6</sub> alkylamino group, a N-C<sub>2-6</sub> alkynyl-N-C<sub>1-6</sub> alkylamino group, a N-C<sub>3-8</sub> cycloalkyl-N-C<sub>1-6</sub> alkylamino group, a N-C<sub>6-10</sub> aryl-N-C<sub>1-6</sub> alkylamino group, a N-C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkyl-N-C<sub>1-6</sub> alkylamino group, a N-C<sub>6-10</sub> aryl C<sub>1-6</sub> alkyl-N-C<sub>1-6</sub> alkylamino group, a N-5- to 10-membered heterocyclic C<sub>1-6</sub> alkyl-N-C<sub>1-6</sub> alkylamino group, a C<sub>1-6</sub> alkylcarbonyl group, a C<sub>1-6</sub> alkoxy carbonyl group, a C<sub>1-6</sub> alkylsulfonyl group, a group represented by the formula -C(=N-R<sup>a1</sup>)R<sup>a2</sup> (wherein R<sup>a1</sup> represents a hydroxyl group or a C<sub>1-6</sub> alkoxy group; R<sup>a2</sup> represents a C<sub>1-6</sub> alkyl group), a C<sub>6-10</sub> aryloxy C<sub>1-6</sub> alkyl group and a 5- to 10-membered heterocycle oxy C<sub>1-6</sub> alkyl group;

<Substituent group a-2>

Substituent Group a-2 represents the group consisting of: a C<sub>1-6</sub> alkyl group, a C<sub>2-6</sub> alkenyl group, a C<sub>2-6</sub> alkynyl group, a C<sub>3-8</sub> cycloalkyl group, a C<sub>6-10</sub> aryl group, a 5- to

10-membered heterocyclic group, a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkyl group, a C<sub>6-10</sub> aryl C<sub>1-6</sub>

alkyl group, a 5- to 10-membered heterocyclic C<sub>1-6</sub> alkyl group, a C<sub>1-6</sub> alkoxy group, a

C<sub>2-6</sub> alkenyloxy group, a C<sub>2-6</sub> alkynyloxy group, a C<sub>3-8</sub> cycloalkoxy group, a C<sub>6-10</sub>

aryloxy group, a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkoxy group, a C<sub>6-10</sub> aryl C<sub>1-6</sub> alkoxy group, a 5-

5 to 10-membered heterocyclic C<sub>1-6</sub> alkoxy group, a C<sub>1-6</sub> alkylthio group, a C<sub>2-6</sub>

alkenylthio group, a C<sub>2-6</sub> alkynylthio group, a C<sub>3-8</sub> cycloalkylthio group, a C<sub>6-10</sub> arylthio

group, a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkylthio group, a C<sub>6-10</sub> aryl C<sub>1-6</sub> alkylthio group, a 5- to

10-membered heterocyclic C<sub>1-6</sub> alkylthio group, a mono-C<sub>1-6</sub> alkylamino group, a

mono-C<sub>2-6</sub> alkenylamino group, a mono-C<sub>2-6</sub> alkynylamino group, a mono-C<sub>3-8</sub>

10 cycloalkylamino group, a mono-C<sub>6-10</sub> arylamino group, a mono-C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub>

alkylamino group, a mono-C<sub>6-10</sub> aryl C<sub>1-6</sub> alkylamino group, a mono-5- to

10-membered heterocyclic C<sub>1-6</sub> alkylamino group, a di-C<sub>1-6</sub> alkylamino group, a N-C<sub>2-6</sub>

alkenyl-N-C<sub>1-6</sub> alkylamino group, a N-C<sub>2-6</sub> alkynyl-N-C<sub>1-6</sub> alkylamino group, a N-C<sub>3-8</sub>

cycloalkyl-N-C<sub>1-6</sub> alkylamino group, a N-C<sub>6-10</sub> aryl-N-C<sub>1-6</sub> alkylamino group, a N-C<sub>3-8</sub>

15 cycloalkyl C<sub>1-6</sub> alkyl-N-C<sub>1-6</sub> alkylamino group, a N-C<sub>6-10</sub> aryl C<sub>1-6</sub> alkyl-N-C<sub>1-6</sub>

alkylamino group, a N-5- to 10-membered heterocyclic C<sub>1-6</sub> alkyl-N-C<sub>1-6</sub> alkylamino

group, a C<sub>6-10</sub> aryloxy-C<sub>1-6</sub> alkyl group and a 5- to 10-membered heterocycle oxy C<sub>1-6</sub>

alkyl group;

with the proviso that each group described in the substituent group a-2 has 1

20 to 3 substituents selected from the following substituent group b;

<Substituent group b>

Substituent group b represents the group consisting of: a halogen atom, a hydroxyl

group, a mercapto group, a cyano group, a carboxyl group, an amino group, a

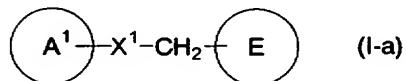
carbamoyl group, a nitro group, a C<sub>1-6</sub> alkyl group, a C<sub>3-8</sub> cycloalkyl group, a C<sub>6-10</sub> aryl

25 group, a 5- to 10-membered heterocyclic group, a C<sub>1-6</sub> alkoxy group, a C<sub>6-10</sub> aryloxy

group, a 5- to 10-membered heterocycle oxy group, a C<sub>1-6</sub> alkylcarbonyl group, a C<sub>1-6</sub> alkoxy carbonyl group, a C<sub>1-6</sub> alkylsulfonyl group, a trifluoromethyl group, a trifluoromethoxy group, a mono-C<sub>1-6</sub> alkylamino group, a di-C<sub>1-6</sub> alkylamino group, a mono-C<sub>6-10</sub> arylamino group which may have one amino group or aminosulfonyl 5 group and a N-C<sub>6-10</sub> aryl C<sub>1-6</sub> alkyl-N-C<sub>1-6</sub> alkylamino group which may have one amino group].

2. The antifungal agent according to Claim 1, wherein X represents a group represented by the formula -NH-C(=Y)-CH<sub>2</sub>-, a group represented by the formula 10 -C(=Y)-NH-CH<sub>2</sub>-, a group represented by the formula -CH<sub>2</sub>-NH- or a group represented by the formula -NH-CH<sub>2</sub>- (wherein Y has the same meaning as defined above).

3. A compound represented by the formula (I-a), or a salt or a hydrate 15 thereof:



[wherein A<sup>1</sup> represents a 3-pyridyl group, a pyrazinyl group, a pyrimidinyl group, a pyrazolyl group, a quinolyl group, an isoquinolyl group, a naphthyldinyl group, a quinoxaliny group, a cinnolinyl group, a quinazolinyl group, an imidazopyridyl group, 20 a benzothiazolyl group, a benzoxazolyl group, a benzimidazolyl group, an indolyl group, a pyrrolopyridyl group, a thienopyridyl group, a furopyridyl group, a 2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl group or a benzothiadiazolyl group;

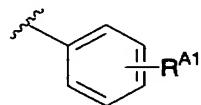
X<sup>1</sup> represents a group represented by the formula -NH-C(=Y<sup>1</sup>)- or a group represented by the formula -C(=Y<sup>1</sup>)-NH-;

$Y^1$  represents an oxygen atom, a sulfur atom or  $NR^{Y^1}$  (wherein  $R^{Y^1}$  represents a  $C_{1-6}$  alkoxy group or a cyano group);

$E$  represents a furyl group, a thienyl group, a pyrrolyl group, a pyridyl group, a tetrazolyl group, a thiazolyl group, a pyrazolyl group or a phenyl group;

5 with the proviso that  $A^1$  may contain 1 to 3 substituents selected from the substituent groups a-1 and a-2 as defined above, and that  $E$  has 1 or 2 substituents selected from the substituent groups a-1 and a-2 defined above]

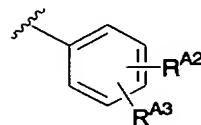
[with the proviso that (1) a compound in which  $E$  represents a group represented by the formula:



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(wherein  $R^{A1}$  represents a phenyl group having a halogen atom, a methoxy group, an ethoxy group, a  $C_{1-6}$  alkoxy carbonyl group or a carboxyl group),

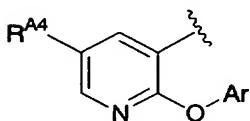
(2) a compound in which  $E$  represents a group represented by the formula:



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(wherein  $R^{A2}$  represents a halogen atom or a methoxy group;  $R^{A3}$  represents a  $C_{1-6}$  alkyl group having a carboxyl group, a  $C_{3-8}$  cycloalkyl group having a carboxyl group or a phenyl group having a carboxyl group),

(3) a compound in which  $A^1$  represents a group represented by the formula:

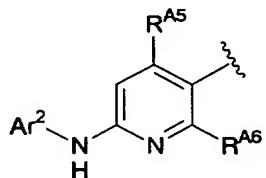


20

(wherein  $R^{A4}$  represents a hydrogen atom or a halogen atom;  $Ar$  represents a phenyl group which may have a substituent) and  $X^1$  represents a group represented by the

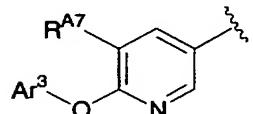
formula -C(=O)-NH-,

(4) a compound in which A<sup>1</sup> represents a group represented by the formula:



(wherein R<sup>A5</sup> represents a hydrogen atom, a C<sub>1-6</sub> alkyl group or a trifluoromethyl group; R<sup>A6</sup> represents a hydrogen atom or a trifluoromethyl group; Ar<sup>2</sup> represents a phenyl group which may have a substituent) and X<sup>1</sup> represents a group represented by the formula -C(=O)-NH- and

(5) a compound in which A<sup>1</sup> represents a group represented by the formula:



10 (wherein R<sup>A7</sup> represents a hydrogen atom, a halogen atom or a C<sub>1-6</sub> alkyl group; Ar<sup>3</sup> represents a phenyl group which may have a substituent) and X<sup>1</sup> represents a group represented by the formula -C(=O)-NH- or a group represented by the formula -NH-C(=O)- are excluded].

15 4. The compound according to Claim 3, or the salt or the hydrate thereof, wherein A<sup>1</sup> represents a 3-pyridyl group, a quinolyl group, a naphthydanyl group, a quinoxaliny group, an imidazopyridyl group, a benzothiazolyl group, a pyrrolopyridyl group, a thienopyridyl group or a furopyridyl group (with the proviso that A<sup>1</sup> may have 1 to 3 substituents selected from the substituent groups a-1 and a-2 defined above).

20

5. The compound according to Claim 3, or the salt or the hydrate thereof, wherein A<sup>1</sup> represents a 3-pyridyl group (with the proviso that A<sup>1</sup> may have 1 to 3

substituents selected from the following substituent groups c-1 and c-2);

<Substituent group c-1>

Substituent group c-1 represents the group consisting of: a halogen atom, an amino group, a C<sub>1-6</sub> alkyl group, a C<sub>2-6</sub> alkenyl group, a C<sub>2-6</sub> alkynyl group, a C<sub>3-8</sub> cycloalkyl group, a C<sub>6-10</sub> aryl group, a 5- to 10-membered heterocyclic group, a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkyl group, a C<sub>6-10</sub> aryl C<sub>1-6</sub> alkyl group, a 5- to 10-membered heterocyclic C<sub>1-6</sub> alkyl group, a C<sub>1-6</sub> alkoxy group, a C<sub>2-6</sub> alkenyloxy group, a C<sub>2-6</sub> alkynyoxy group, a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkoxy group, a C<sub>6-10</sub> aryl C<sub>1-6</sub> alkoxy group, a 5- to 10-membered heterocyclic C<sub>1-6</sub> alkoxy group, a mono-C<sub>1-6</sub> alkylamino group, a mono-C<sub>2-6</sub> alkenylamino group, a mono-C<sub>2-6</sub> alkynylamino group, a mono-C<sub>6-10</sub> arylamino group, a mono-C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkylamino group, a mono-C<sub>6-10</sub> aryl C<sub>1-6</sub> alkylamino group, a mono-5- to 10-membered heterocyclic C<sub>1-6</sub> alkylamino group, a C<sub>1-6</sub> alkylcarbonyl group and a group represented by the formula -C(=N-OH)R<sup>a2</sup> (wherein R<sup>a2</sup> has the same meaning as defined above);

<Substituent group c-2>

Substituent group c-2 represents the group consisting of: a C<sub>1-6</sub> alkyl group, a C<sub>2-6</sub> alkenyl group, a C<sub>2-6</sub> alkynyl group, a C<sub>3-8</sub> cycloalkyl group, a C<sub>6-10</sub> aryl group, a 5- to 10-membered heterocyclic group, a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkyl group, a C<sub>6-10</sub> aryl C<sub>1-6</sub> alkyl group, a 5- to 10-membered heterocyclic C<sub>1-6</sub> alkyl group, a C<sub>1-6</sub> alkoxy group, a C<sub>2-6</sub> alkenyloxy group, a C<sub>2-6</sub> alkynyoxy group, a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkoxy group, a C<sub>6-10</sub> aryl C<sub>1-6</sub> alkoxy group, a 5- to 10-membered heterocyclic C<sub>1-6</sub> alkoxy group, a mono-C<sub>1-6</sub> alkylamino group, a mono-C<sub>2-6</sub> alkenylamino group, a mono-C<sub>2-6</sub> alkynylamino group, a mono-C<sub>3-8</sub> cycloalkylamino group, a mono-C<sub>6-10</sub> arylamino group, a mono-C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkylamino group, a mono-C<sub>6-10</sub> aryl C<sub>1-6</sub> alkylamino group, a mono-5- to 10-membered heterocyclic C<sub>1-6</sub> alkylamino group and a mono-5- to 10-membered heterocyclic C<sub>1-6</sub> alkylamino group;

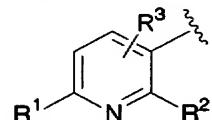
with the proviso that each group described in substituent group c-2 has 1 to 3 substituents selected from the following substituent group d;

**<Substituent group d>**

Substituent group d represents the group consisting of: a halogen atom, a hydroxyl group, a carboxyl group, an amino group, a carbamoyl group, a C<sub>1-6</sub> alkoxy group, a mono-C<sub>1-6</sub> alkylamino group, a di-C<sub>1-6</sub> alkylamino group, a mono-C<sub>6-10</sub> arylamino group that may have one amino group or aminosulfonyl group, a N-C<sub>6-10</sub> aryl C<sub>1-6</sub> alkyl-N-C<sub>1-6</sub> alkylamino group which may have one amino group, a cyano group, a C<sub>6-10</sub> aryl group, a 5- to 10-membered heterocyclic group and a C<sub>1-6</sub> alkoxy carbonyl group.

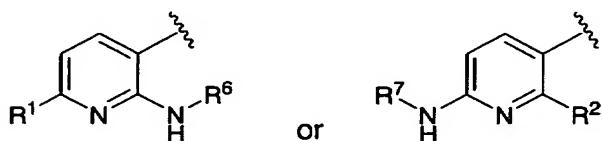
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6. The compound according to Claim 3, or the salt or the hydrate thereof, wherein A<sup>1</sup> represents a group represented by the formula:



15 [wherein R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> may be the same as or different from each other and represent a substituent selected from the substituent groups c-1 and c-2 defined above].

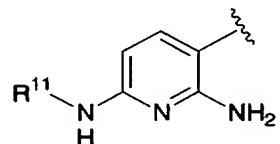
20 7. The compound according to Claim 3, or the salt or the hydrate thereof, wherein A<sup>1</sup> represents a group represented by the formula:



[wherein R<sup>1</sup> and R<sup>2</sup> have the same meanings as defined above, respectively; R<sup>6</sup> and

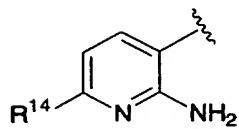
R<sup>7</sup> may be the same or different from each other and represent a hydrogen atom, a C<sub>1-6</sub> alkyl group, a C<sub>3-8</sub> cycloalkyl group or a group represented by the formula -CHR<sup>8</sup>-(CH<sub>2</sub>)<sub>n1</sub>-R<sup>9</sup> (wherein R<sup>8</sup> represents a hydrogen atom, a carboxyl group or a C<sub>1-6</sub> alkoxy carbonyl group; R<sup>9</sup> represents a hydroxyl group, a carboxyl group, a carbamoyl group, a C<sub>3-8</sub> cycloalkyl group, a furyl group, a thieryl group, a pyrrolyl group, a pyridyl group, a triazolyl group, a tetrahydrofuryl group, a C<sub>1-6</sub> alkoxy group, a C<sub>1-6</sub> alkoxy carbonyl group, a mono-C<sub>1-6</sub> alkylamino group, a di-C<sub>1-6</sub> alkylamino group, a phenyl group which may have 1 to 3 substituents selected from the substituent group d defined above, a mono-C<sub>6-10</sub> arylamino group which may have 10 one amino group or an N-C<sub>6-10</sub> aryl C<sub>1-6</sub> alkyl-N-C<sub>1-6</sub> alkylamino group which may have one amino group; n1 represents an integer from 0 to 3)].

8. The compound according to Claim 3, or the salt or the hydrate thereof, wherein A<sup>1</sup> represents a group represented by the formula:



(wherein R<sup>11</sup> represents a hydrogen atom or a group represented by the formula -CHR<sup>12</sup>-(CH<sub>2</sub>)<sub>n2</sub>-R<sup>13</sup> (wherein R<sup>12</sup> represents a hydrogen atom or a carboxyl group; R<sup>13</sup> represents a carboxyl group or a phenyl group which may have 1 to 3 substituents selected from the substituent group d defined above; n2 represents an integer from 0 to 3)).

9. The compound according to Claim 3, or the salt or the hydrate thereof, wherein A<sup>1</sup> represents a group represented by the formula:



(wherein R<sup>14</sup> represents a C<sub>1-6</sub> alkyl group having one C<sub>1-6</sub> alkoxy group).

10. The compound according to Claim 3, or the salt or the hydrate thereof,  
5 wherein A<sup>1</sup> represents a 6-quinolyl group, a [1,5]naphthylidin-2-yl group, a  
6-quinoxaliny group, an imidazo[1,2-a]pyridin-6-yl group, a benzothiazol-6-yl group,  
a 1*H*-pyrrolo[2,3-b]pyridin-5-yl group, a pyrrolo[3,2-b]pyridin-1-yl group, a  
thieno[2,3-b]pyridin-5-yl group, a thieno[3,2-b]pyridin-6-yl group or a  
furo[3,2-b]pyridin-6-yl group (with the proviso that A<sup>1</sup> may have 1 to 3 substituents  
10 selected from the substituent groups c-1 and c-2 defined above).

11. The compound according to Claim 3, or the salt or the hydrate thereof,  
wherein A<sup>1</sup> represents a 6-quinolyl group, a [1,5]naphthylidin-2-yl group, a  
6-quinoxaliny group, an imidazo[1,2-a]pyridin-6-yl group, a benzothiazol-6-yl group,  
15 a pyrrolo[3,2-b]pyridin-1-yl group, a 1*H*-pyrrolo[2,3-b]pyridin-5-yl group which may  
have one amino group, a thieno[2,3-b]pyridin-5-yl group which may have one amino  
group, a thieno[3,2-b]pyridin-6-yl group which may have one amino group or  
furo[3,2-b]pyridin-6-yl group which may have one amino group.

20 12. The compound according to Claim 3, or the salt or the hydrate thereof,  
wherein A<sup>1</sup> represents a 6-quinolyl group.

13. The compound according to Claim 3, or the salt or the hydrate thereof,  
wherein A<sup>1</sup> represents a [1,5]naphthylidin-2-yl group.

14. The compound according to Claim 3, or the salt or the hydrate thereof,  
wherein A<sup>1</sup> represents an imidazo[1,2-a]pyridin-6-yl group.

5 15. The compound according to Claim 3, or the salt or the hydrate thereof,  
wherein A<sup>1</sup> represents a benzothiazol-6-yl group.

16. The compound according to Claim 3, or the salt or the hydrate thereof,  
wherein A<sup>1</sup> represents a 3-pyridyl group, a pyrazinyl group, a pyrimidinyl group, a  
10 quinolyl group, an isoquinolyl group, a naphthyldinyl group, a quinoxalinyl group, a  
cinnolinyl group, a quinazolinyl group, an imidazopyridyl group, a benzothiazolyl  
group, a benzoxazolyl group, a benzimidazolyl group, an indolyl group, a  
pyrrolopyridyl group, a thienopyridyl group, a furopyridyl group, a  
2,3-dihydro-1*H*-pyrrolo[2,3-b]pyridin-5-yl group or a benzothiadiazolyl group (with the  
15 proviso that A<sup>1</sup> may have 1 to 3 substituents selected from the substituent groups a-1  
and a-2 defined above).

17. The compound according to Claim 3, or the salt or the hydrate thereof,  
wherein A<sup>1</sup> represents a 3-pyridyl group, a pyrazinyl group, a pyrimidinyl group, a  
20 quinolyl group, an isoquinolyl group, a naphthyldinyl group, a quinoxalinyl group, a  
cinnolinyl group, a quinazolinyl group, an imidazopyridyl group, a benzothiazolyl  
group, a benzoxazolyl group, a benzimidazolyl group, an indolyl group, a  
pyrrolopyridyl group, a thienopyridyl group, a furopyridyl group, a  
2,3-dihydro-1*H*-pyrrolo[2,3-b]pyridin-5-yl group or a benzothiadiazolyl group (with the  
25 proviso that A<sup>1</sup> may have 1 to 3 substituents selected from the substituent groups c-1

and c-2 defined above).

18. The compound according to Claim 3, or the salt or the hydrate thereof, wherein A<sup>1</sup> represents a 3-pyridyl group, a pyrazinyl group, a pyrimidinyl group, a 5 quinolyl group, an isoquinolyl group, a naphthyldinyl group, a quinoxalinyl group, a cinnolinyl group, a quinazolinyl group, an imidazopyridyl group, a benzothiazolyl group, a benzoxazolyl group, a benzimidazolyl group, an indolyl group, a pyrrolopyridyl group, a thienopyridyl group, a furopyridyl group, a 2,3-dihydro-1*H*-pyrrolo[2,3-*b*]pyridin-5-yl group or a benzothiadiazolyl group (with the 10 proviso that A<sup>1</sup> may have 1 to 3 substituents selected from the following substituent groups c'-1 and c'-2);

<Substituent group c'-1>

Substituent group c'-1 represents the group consisting of: an amino group, a C<sub>1-6</sub> alkyl group and a mono-C<sub>1-6</sub> alkylamino group; and

15 <Substituent group c'-2>

Substituent group c'-2 represents the group consisting of: a C<sub>1-6</sub> alkyl group and a mono-C<sub>1-6</sub> alkylamino group;

with the proviso that each group described in substituent group c'-2 has 1 to 3 substituents selected from the following substituent group d';

20 <Substituent group d'>

Substituent group d' represents the group consisting of: a halogen atom, a hydroxyl group, a cyano group, a carboxyl group and a C<sub>1-6</sub> alkoxy group.

19. The compound according to any one of Claims 3 to 18, or the salt or the 25 hydrate thereof, wherein X<sup>1</sup> represents a group represented by the formula

-C(=O)-NH- or a group represented by the formula -NH-C(=O)-.

20. The compound according to any one of Claims 3 to 18, or the salt or the  
hydrate thereof, wherein X<sup>1</sup> represents a group represented by the formula  
5 -C(=O)-NH-.

21. The compound according to any one of Claims 3 to 20, or the salt or the  
hydrate thereof, wherein E represents a furyl group, a thienyl group, a pyrrolyl group,  
a phenyl group or pyridyl group (with the proviso that E has 1 or 2 substituents  
10 selected from the substituent groups a-1 and a-2 defined above).

22. The compound according to any one of Claims 3 to 20, or the salt or the  
hydrate thereof, wherein E represents a furyl group, a thienyl group, a pyrrolyl group,  
a phenyl group or pyridyl group (with the proviso that E has 1 or 2 substituents  
15 selected from the following substituent groups e-1 and e-2);

**<Substituent group e-1>**

Substituent group e-1 represents the group consisting of: a halogen atom, a hydroxyl  
group, a C<sub>1-6</sub> alkyl group, a C<sub>2-6</sub> alkenyl group, a C<sub>2-6</sub> alkynyl group, a C<sub>6-10</sub> aryl group,  
a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkyl group, a C<sub>3-8</sub> cycloalkylidene C<sub>1-6</sub> alkyl group, a C<sub>6-10</sub> aryl  
20 C<sub>1-6</sub> alkyl group, 5- to 10-membered heterocyclic C<sub>1-6</sub> alkyl group, a C<sub>1-6</sub> alkoxy group,  
a C<sub>2-6</sub> alkenyloxy group, a C<sub>2-6</sub> alkynyloxy group, a C<sub>6-10</sub> aryloxy group, a C<sub>3-8</sub>  
cycloalkyl C<sub>1-6</sub> alkoxy group, a C<sub>6-10</sub> aryl C<sub>1-6</sub> alkoxy group, a 5- to 10-membered  
heterocyclic C<sub>1-6</sub> alkoxy group, a C<sub>6-10</sub> arylthio group, a C<sub>6-10</sub> aryl C<sub>1-6</sub> alkylthio group,  
a mono-C<sub>6-10</sub> arylamino group, a mono-C<sub>6-10</sub> aryl C<sub>1-6</sub> alkylamino group, a N-C<sub>6-10</sub>  
25 aryl-N-C<sub>1-6</sub> alkylamino group, a N-C<sub>6-10</sub> aryl C<sub>1-6</sub> alkyl-N-C<sub>1-6</sub> alkylamino group, a C<sub>6-10</sub>

aryloxy C<sub>1-6</sub> alkyl group and a 5- to 10-membered heterocycle oxy C<sub>1-6</sub> alkyl group;

**<Substituent group e-2>**

Substituent group e-2 represents the group consisting of: a C<sub>1-6</sub> alkyl group, a C<sub>2-6</sub> alkenyl group, a C<sub>2-6</sub> alkynyl group, a C<sub>6-10</sub> aryl group, a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkyl group, a C<sub>6-10</sub> aryl C<sub>1-6</sub> alkyl group, a 5- to 10-membered heterocyclic C<sub>1-6</sub> alkyl group, a C<sub>1-6</sub> alkoxy group, a C<sub>2-6</sub> alkenyloxy group, a C<sub>2-6</sub> alkynyloxy group, a C<sub>6-10</sub> aryloxy group, a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkoxy group, a C<sub>6-10</sub> aryl C<sub>1-6</sub> alkoxy group, 5- to 10-membered heterocycle-C<sub>1-6</sub> alkoxy group, a C<sub>6-10</sub> arylthio group, a C<sub>6-10</sub> aryl C<sub>1-6</sub> alkylthio group, a mono-C<sub>6-10</sub> arylamino group, a mono-C<sub>6-10</sub> aryl C<sub>1-6</sub> alkylamino group, a N-C<sub>6-10</sub> aryl-N-C<sub>1-6</sub> alkylamino group, a N-C<sub>6-10</sub> aryl C<sub>1-6</sub> alkyl-N-C<sub>1-6</sub> alkylamino group, a C<sub>6-10</sub> aryloxy C<sub>1-6</sub> alkyl group and a 5- to 10-membered heterocycle oxy C<sub>1-6</sub> alkyl group;

with the proviso that each group described in substituent group e-2 has 1 to 3 substituents selected from the following substituent group f;

**<Substituent group f>**

Substituent group f represents the group consisting of: a halogen atom, a hydroxyl group, a cyano group, an amino group, a nitro group, a C<sub>3-8</sub> cycloalkyl group, a C<sub>1-6</sub> alkoxy group, a C<sub>6-10</sub> aryloxy group, a 5- to 10-membered heterocycle oxy group, a C<sub>1-6</sub> alkylcarbonyl group, a C<sub>1-6</sub> alkoxycarbonyl group, a C<sub>1-6</sub> alkylsulfonyl group, a mono-C<sub>6-10</sub> arylamino group, a trifluoromethyl group, a trifluoromethoxy group and a C<sub>1-6</sub> alkyl group.

23. The compound according to any one of Claims 3 to 20, or the salt or the hydrate thereof, wherein E represents a furyl group, a thieryl group, a pyrrolyl group, 25 a phenyl group or a pyridyl group (with the proviso that E has one substituent

selected from the following substituent groups g-1 and g-2);

<Substituent group g-1>

Substituent group g-1 represents the group consisting of: a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkyl group, a phenyl C<sub>1-6</sub> alkyl group, a furyl C<sub>1-6</sub> alkyl group, a thienyl C<sub>1-6</sub> alkyl group, a benzofuryl C<sub>1-6</sub> alkyl group, a benzothienyl C<sub>1-6</sub> alkyl group, a C<sub>1-6</sub> alkoxy group, a phenoxy group, a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkoxy group, a phenyl C<sub>1-6</sub> alkoxy group, a furyl C<sub>1-6</sub> alkoxy group, a thienyl C<sub>1-6</sub> alkoxy group, a pyridyl C<sub>1-6</sub> alkoxy group, a phenoxy C<sub>1-6</sub> alkyl group and a pyridyloxy C<sub>1-6</sub> alkyl group;

<Substituent group g-2>

Substituent group g-2 represents the group consisting of: a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkyl group, a phenyl C<sub>1-6</sub> alkyl group, a furyl C<sub>1-6</sub> alkyl group, a thienyl C<sub>1-6</sub> alkyl group, a benzofuryl C<sub>1-6</sub> alkyl group, a benzothienyl C<sub>1-6</sub> alkyl group, a C<sub>1-6</sub> alkoxy group, a phenoxy group, a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkoxy group, a phenyl C<sub>1-6</sub> alkoxy group, a furyl C<sub>1-6</sub> alkoxy group, a thienyl C<sub>1-6</sub> alkoxy group, a pyridyl C<sub>1-6</sub> alkoxy group, a phenoxy C<sub>1-6</sub> alkyl group and a pyridyloxy C<sub>1-6</sub> alkyl group;

with the proviso that each group described in substituent group g-2 has 1 to 3 substituents selected from the following substituent group h;

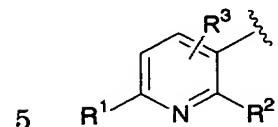
<Substituent group h>

Substituent group h represents the group consisting of: a halogen atom, a hydroxyl

group, a cyano group and a C<sub>1-6</sub> alkyl group.

24. The compound according to any one of Claims 3 to 20, or the salt or the hydrate thereof, wherein E represents a 2-furyl group, a 2-thienyl group, a 3-pyrrolyl group, a phenyl group, a 2-pyridyl group or 3-pyridyl group (with the proviso that E has one substituent selected from the substituent groups g-1 and g-2 defined above).

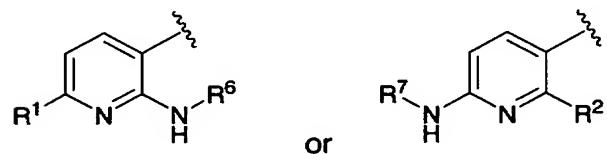
25. The compound according to Claim 3, or the salt or the hydrate thereof, wherein  $X^1$  represents a group represented by the formula  $-C(=O)-NH-$ , and  $A^1$  represents a group represented by the formula:



(wherein  $R^1$ ,  $R^2$  and  $R^3$  have the same meanings as defined above, respectively), and  $E$  represents a 2-furyl group, a 2-thienyl group, a 3-pyrrolyl group, a phenyl group, a 2-pyridyl group or a 3-pyridyl group (with the proviso that  $E$  has one substituent selected from the substituent group g-1 or g-2 defined above).

10

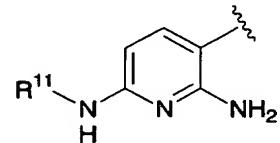
26. The compound according to Claim 25, or the salt or the hydrate thereof, wherein  $A^1$  represents a group represented by the formula:



(wherein  $R^1$ ,  $R^2$ ,  $R^6$  and  $R^7$  have the same meanings as defined above, respectively).

15

27. The compound according to Claim 25, or the salt or the hydrate thereof, wherein  $A^1$  represents a group represented by the formula:

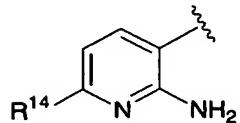


(wherein  $R^{11}$  has the same meaning as defined above).

20

28. The compound according to Claim 25, or the salt or the hydrate thereof,

wherein A<sup>1</sup> represents a group represented by the formula:



(wherein R<sup>14</sup> has the same meaning as defined above).

5           29. The compound according to Claim 3, or the salt or the hydrate thereof, wherein X<sup>1</sup> represents a group represented by the formula -C(=O)-NH-, A<sup>1</sup> represents a 6-quinolyl group, a [1,5]naphthylidin-2-yl group, a 6-quinoxaliny group, an imidazo[1,2-a]pyridin-6-yl group, a benzothiazol-6-yl group, a pyrrolo[3,2-b]pyridin-1-yl group, a 1*H*-pyrrolo[2,3-b]pyridin-5-yl group which may have 10 one amino group, a thieno[2,3-b]pyridin-5-yl group which may have one amino group, a thieno[3,2-b]pyridin-6-yl group which may have one amino group or a furo[3,2-b]pyridin-6-yl group which may have one amino group, and E represents a 2-furyl group, a 2-thienyl group, a 3-pyrrolyl group, a phenyl group or a 2-pyridyl group (with the proviso that E has a substituent selected from the substituent group 15 g-1 or g-2 defined above).

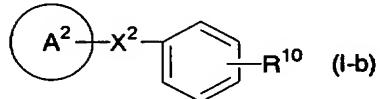
30. The compound according to Claim 29, or the salt or the hydrate thereof, wherein A<sup>1</sup> represents a 6-quinolyl group.

20           31. The compound according to Claim 29, or the salt or the hydrate thereof, wherein A<sup>1</sup> represents a [1,5]naphthylidin-2-yl group.

32. The compound according to Claim 29, or the salt or the hydrate thereof, wherein A<sup>1</sup> represents an imidazo[1,2-a]pyridin-6-yl group.

33. The compound according to Claim 29, or the salt or the hydrate thereof, wherein A<sup>1</sup> represents a benzothiazol-6-yl group.

5 34. A compound represented by the formula (I-b), or a salt or a hydrate thereof:



[wherein A<sup>2</sup> represents a 6-quinolyl group, a 4-quinazolinyl group or a pyrido[2,3-d]pyrimidin-4-yl group which may have an amino group;

10 X<sup>2</sup> represents a group represented by the formula -O-CH<sub>2</sub>-, a group represented by the formula -S-CH<sub>2</sub>-, a group represented by the formula -C(=O)-CH<sub>2</sub>-, a group represented by the formula -NH-CH<sub>2</sub>- or a group represented by the formula -CH<sub>2</sub>-NH-;

15 R<sup>10</sup> represents a C<sub>1-6</sub> alkyl group, a C<sub>6-10</sub> aryloxy group or a C<sub>6-10</sub> aryl C<sub>1-6</sub> alkoxy group].

35. The compound according to Claim 34, or the salt or the hydrate thereof, wherein X<sup>2</sup> represents a group represented by the formula -NH-CH<sub>2</sub>- or a group represented by the formula -CH<sub>2</sub>-NH-.

20

36. A pharmaceutical composition comprising the compound according to Claim 3 or 34, or the salt or the hydrate thereof.

37. An antifungal agent comprising, as an active ingredient, the compound

according to Claim 3 or 34, or the salt or the hydrate thereof.

38. A method for prevention or treatment of fungal infection comprising administering a pharmacologically effective amount of the compound according to 5 Claim 3 or 34, or the salt or the hydrate thereof.
39. A use of the compound according to Claim 3 or 34, or the salt or the hydrate thereof, for manufacture of an antifungal agent.
- 10 40. A method for prevention or treatment of fungal infection comprising administering a pharmacologically effective amount of the antifungal agent according to Claim 1.